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AIR POLLUTION REPORT

FEDERAL FACILITIES

METROPOLITAN PHILADELPHIA INTERSTATE

AIR QUALITY CONTROL REGION

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NATIONAL AIR POLLUTION CONTROL
ADMINISTRATION

OCTOBER 1970

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15. Supplementary Notes

16. Abstracts

A listing of the Federal facilities by State, County, and City is presented. A break-down of type and amount of fuels used by each political division is also tabulated. The contribution of the Federal Government to the air pollution in this Region is presented in a series of tables. The status of the Federal installations in the Region with respect to the implementation of their abatement plans is also shown.

17. Key Words and Document Analysis. 17a. Descriptors

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Exhaust emissions
Fuels
Refuse disposal
Coal
National government
Boilers
Abatement
Urban Areas
Sulfur Oxides
Nitrogen Oxides
Carbon monoxide
Particles
Hydrocarbons

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NARRATIVE

I. BOUNDARIES OF THE AIR QUALITY CONTROL REGION

The Metropolitan Philadelphia Interstate Air Quality Control Region was designated on December 12, 1968. The region is composed of eleven counties in three States. These political boundaries are: Bucks, Chester, Delaware, Montgomery, and Philadelphia Counties in Pennsylvania; Burlington, Camden, Gloucester, Mercer and Salem Counties in New Jersey, and New Castle County in Delaware. A map of the Region showing these counties is presented in Figure 1.

II. TYPE AND NUMBER OF FEDERAL FACILITIES

There are 98 Federal facilities in the Region that burn fuel or refuse. A listing of these facilities by State, County, and City is presented in Table I. Included in this table is a listing of the amount of fuel or refuse burned per year for each installation. Table II shows a break-down of type and amount of fuels used by each political division.

III. FEDERAL CONTRIBUTION TO AIR POLLUTION

The contribution of the Federal Government to the air pollution in this Region is presented in a series of tables. Table III lists the amount and type of pollution the installations emit in each County of the Region. Table IV lists those specific Federal facilities ("Point Sources") which emit more than 100 tons per year of any one type of pollutant and the approximate rate at which they are polluting. Table V lists the six coal fired boilers which are in violation of 42 CFR 76.4. This table also shows the number and size of the boilers, amount of coal used, and amount of particulate emitted and allowed.

IV. REMEDIAL MEASURES

The ~~current (July 1970)~~ status of the Federal installations in the Region with respect to the implementation of their abatement plans* is shown in Table VI. Table VII is a series of bar graphs indicating the reductions in emissions from Federal installations that would result in 1973 if all of the abatement plans listed in Table VI were completed. The reductions of the graphs depict the following general trends.

*(As prescribed in the Clean Air Act and Executive Order 11507)

1. Sulfur Oxides - Present local legislations sets an upper limit of 0.6% sulfur in fuel oils. Many installations have not been able to procure the low sulfur fuel to the present. The reductions indicated is to a large extend due to the future availability of such fuels.

2. Particulates - Reduction in particulate emissions will primarily result from conversions from coal to other fuels and/or the construction of higher efficiency particle collection devices.

3. Hydrocarbons and Nitrogen Oxides - Presently planned abatement measures will not significantly reduce these two pollutants. They may in fact, increase if there is significant growth in the number or size of installations.

4. Carbon Monoxide - A general reduction in carbon monoxide emissions from stationary Federal facilities will occur in the next three years. This lessening will be due primarily to improved incineration techniques and the control of emissions from open oil burning at the Navy's fire fighting school.

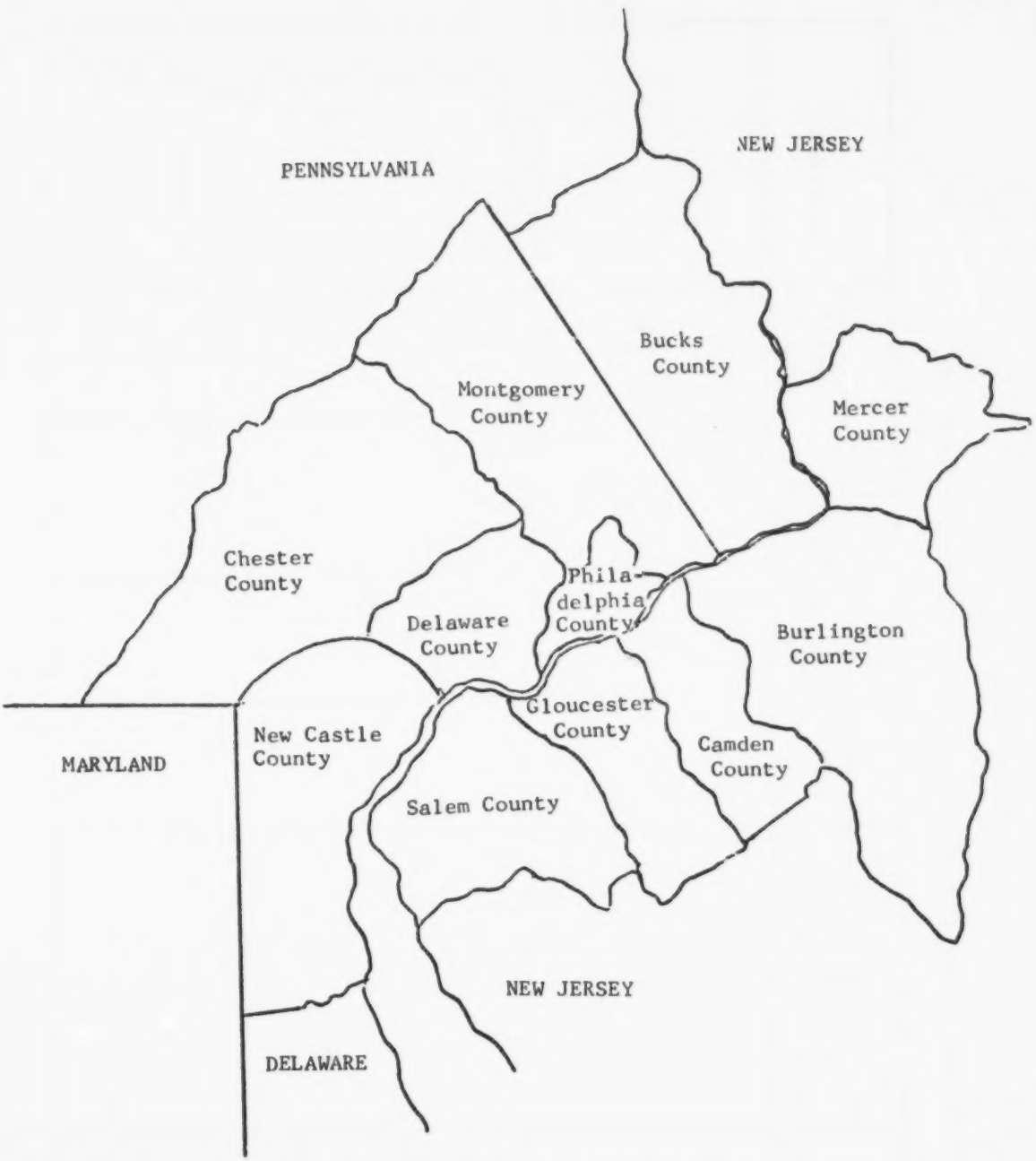

FIGURE 1.

BOUNDARIES OF THE
METROPOLITAN PHILADELPHIA INTERSTATE
AIR QUALITY CONTROL REGION

TABLE I

FUEL USAGE AND REFUSE DISPOSAL FOR FEDERAL FACILITIES

LOCATIONS	REFUSE (LBS/DAY)		FUELS (PER YEAR)				COMMENTS
	OPEN BURNING	INCIN-ERATION	GAS (MCF)	DIST OIL (GALS)	RESID OIL (GALS)	COAL (TONS)	
DELAWARE NEW CASTLE NEW CASTLE							
POST OFFICE	0	0	0	0	0	36	
NEW CASTLE LIGHT	0	0	0	0	0	0	UNMANNED NAVIG AIDE
DELAWARE NEW CASTLE NO CITY ID							
CHESAPEAKE - DELAWARE CAN	0	0	0	21301	0	0	
DELAWARE NEW CASTLE PORT PENN							
NAVIGATION LIGHTS (5)	0	0	0	0	0	0	UNMANNED

TABLE 1

FUEL USAGE AND REFUSE DISPOSAL FOR FEDERAL FACILITIES

LOCATIONS	REFUSE (LBS/DAY)		FUELS (PER YEAR)				COMMENTS
	OPEN BURNING	INCIN-ERATION	GAS (MCF)	DIST OIL (GALS)	RESID OIL (GALS)	COAL (TONS)	
DELAWARE NEW CASTLE DELAWARE CTY PT DELAWARE LIGHT	0	0	0	0	0	0	UNMANNED NAVIG AIDE
DELAWARE NEW CASTLE MARSHALLTOWN NAVAL RESERV TRAINING CTR	0	0	0	20000	0	0	
DELAWARE NEW CASTLE MIDDLETOWN REEDY ISLAND EIGHT	0	0	0	0	0	0	UNMANNED NAVIG AIDE
DELAWARE NEW CASTLE NEWARK POST OFFICE	0	0	0	7000	0	0	

TABLE I

FUEL USAGE AND REFUSE DISPOSAL FOR FEDERAL FACILITIES

LOCATIONS	REFUSE (LBS/DAY)		FUELS (PER YEAR)				COMMENTS
	OPEN BURNING	INCIN-ERATION	GAS (MCF)	DIST OIL (GALS)	RESID OIL (GALS)	COAL (TONS)	
VETERANS HOSPITAL	0	4730	0	0	500001	0	
DELAWARE							
NEW CASTLE							
WILMINGTON							
CHERRY ISLAND LIGHT	0	0	0	0	0	0	UNMANNED NAVIG AIDE
GSA CUSTOM-HOUSE	0	0	0	0	0	50	
KIRKWOOD USARC	0	0	0	0	30000	0	
NEW JERSEY							
BURLINGTON							
BORDENTOWN							
POST OFFICE	0	0	0	5000	0	0	

TABLE I

FUEL USAGE AND REFUSE DISPOSAL FOR FEDERAL FACILITIES

LOCATIONS	REFUSE (LBS/DAY)		FUELS (PER YEAR)				COMMENTS
	OPEN BURNING	INCIN-ERATION	GAS (MCF)	DIST OIL (GALS)	RESID OIL (GALS)	COAL (TONS)	
NEW JERSEY BURLINGTON BURLINGTON							
POST OFFICE AND FED BLDG	0	0	1050	0	0	0	HIGH & LIBRARY STS
ARMY AMMO PLANT	0	0	0	1053600	7800000	0	
NEW JERSEY BURLINGTON FLORENCE							
KEYSTONE CHAN LIGHT	0	0	0	0	0	0	UNMANNED NAVIG AIDE
NEW JERSEY BURLINGTON FT DIX							
FORT DIX	0	1000	0	8300000	10090000	13000	

TABLE I

FUEL USAGE AND REFUSE DISPOSAL FOR FEDERAL FACILITIES

LOCATIONS	REFUSE (LBS/DAY)		FUELS (PER YEAR)				COMMENTS
	OPEN BURNING	INCIN-ERATION	GAS (MCF)	DIST OIL (GALS)	RESID OIL (GALS)	COAL (TONS)	
FT DIX SCHOOL	0	0	0	31000	0	0	
NEW JERSEY BURLINGTON MOORESTOWN							
POST OFFICE	0	0	0	7000	0	0	
BMEWS TEST SITE	0	0	0	44000	0	0	
ENTOMOLOGY RESEARCH STA	0	2	2080	150000	0	0	
NEW JERSEY BURLINGTON MOUNT HOLLY							
POST OFFICE	0	0	0	8400	0	0	

TABLE I

FUEL USAGE AND REFUSE DISPOSAI FOR FEDERAL FACILITIES

LOCATIONS	REFUSE (LBS/DAY)		FUELS (PER YEAR,				COMMENTS
	OPEL BURNING	INCIN-ERATION	GAS (MCF)	DIST OIL (GALS)	RESID OIL (GALS)	COAL (TONS)	
NEW JERSEY BURLINGTON NO CITY ID							
NIKE 25	0	0	0	10000	0	0	
NEW JERSEY BURLINGTON RIVERSIDE							
POST OFFICE	0	0	0	8000	0	0	
NEW JERSEY BURLINGTON RIVERTON							
POST OFFICE	0	0	0	0	0	38	
NEW JERSEY BURLINGTON WRIGHTSTOWN							
MCGUIRE AFB	0	0	0	439667	82000	40068	

TABLE I

FUEL USAGE AND REFUSE DISPOSAL FOR FEDERAL FACILITIES

LOCATIONS	REFUSE (LBS/DAY)		FUELS (PER YEAR)				COMMENTS
	OPEN BURNING	INCIN-ERATION	GAS (MCF)	DIST OIL (GALS)	RESID OIL (GALS)	COAL (TONS)	
MCGUIRE SCHOOLS	0	0	0	0	125913	0	
NEW JERSEY CAMDEN CAMDEN							
USARC	0	0	0	22000	0	0	
NEW JERSEY CAMDEN GIBBSBORO							
POST OFFICE CUSTOM HOUSE	0	0	0	88000	0	0	4TH & MARKET STS
AIR FORCE STATION	0	0	0	70000	0	0	RADAR INST
NEW JERSEY CAMDEN GLOUCESTER							
POST OFFICE	0	0	0	0	0	0	

TABLE I

FUEL USAGE AND REFUSE DISPOSAL FOR FEDERAL FACILITIES

LOCATIONS	REFUSE (LBS/DAY)		FUELS (PER YEAR)				COMMENTS
	OPEN BURNING	INCIN-ERATION	GAS (MCF)	DIST OIL (GALS)	RESID OIL (GALS)	COAL (TONS)	
COAST GUARD BASE	0	0	0	57000	0	0	
NEW JERSEY CAMDEN HADDON HGHTS POST OFFICE	0	0	0	5500	0	0	
NEW JERSEY CAMDEN HADDONFIELD POST OFFICE	0	0	0	9800	0	0	
NEW JERSEY GLOUCESTER PAULSBORO POST OFFICE	0	0	662	0	0	0	

TABLE I

FUEL USAGE AND REFUSE DISPOSAL FOR FEDERAL FACILITIES

LOCATIONS	REFUSE (LBS/DAY)		FUELS (PER YEAR)				COMMENTS
	OPEN BURNING	INCIN-ERATION	GAS (MCF)	DIST OIL (GALS)	RESID OIL (GALS)	COAL (TONS)	
NEW JERSEY GLOUCESTER PITMAN POST OFFICE	0	0	0	10500	0	0	
NEW JERSEY GLOUCESTER WOODBURY POST OFFICE	0	0	0	5000	0	0	
NEW JERSEY MERCER PRINCETON POST OFFICE	0	0	0	0	0	38	
NEW JERSEY MERCER HIGHTSTOWN POST OFFICE	0	0	0	7000	0	0	

TABLE 1

FUEL USAGE AND REFUSE DISPOSAL FOR FEDERAL FACILITIES

LOCATIONS	REFUSE (LBS/DAY)		FUELS (PER YEAR)				COMMENTS
	OPEN BURNING	INCIN-ERATION	GAS (MCF)	DIST OIL (GALS)	RESID OIL (GALS)	COAL (TONS)	
NEW JERSEY							
MERCER							
TRENTON							
NAVY TURBINE TEST CENTER	0	0	0	5400	1131000	0	
NAVY RESERVE TRAIN CENTER	0	0	0	17654	0	139	
POST OFFICE COURT HOUSE	0	1400	13000	0	0	0	
STRYKER USARC	0	0	0	23200	0	0	
NEW JERSEY							
SALEM							
PEDRICKTOWN							
DISPOSAL AREA	0	0	0	0	0	0	INACTIVE SITE

TABLE I

FUEL USAGE AND REFUSE DISPOSAL FOR FEDERAL FACILITIES

LOCATIONS	REFUSE (LBS/DAY)		FUELS (PER YEAR)				COMMENTS
	OPEN BURNING	INCIN-ERATION	GAS (MCF)	DIST OIL (GALS)	RESID OIL (GALS)	COAL (TONS)	
NORAD CENTER	0	0	0	0	207870	0	
NEW JERSEY SALEM PENNS GROVE POST OFFICE	0	0	0	7235	0	0	
NEW JERSEY SALEM SALEM POST OFFICE	0	0	0	6545	0	0	
PENNSYLVANIA BUCKS BRISTOL POST OFFICE	0	0	0	9000	0	0	

TABLE I

FUEL USAGE AND REFUSE DISPOSAL FOR FEDERAL FACILITIES

LOCATIONS	REFUSE (LBS/DAY)		FUELS (PER YEAR)				COMMENTS
	OPEN BURNING	INCIN-ERATION	GAS (MCF)	DIST OIL (GALS)	RESID OIL (GALS)	COAL (TONS)	
PENNSYLVANIA BUCKS DOYLESTOWN POST OFFICE	0	0	0	9000	0	0	
PENNSYLVANIA BUCKS JOHNSVILLE NAVAL AIR DELMNT CENTR	0	240	0	0	1215000	0	
PENNSYLVANIA BUCKS MORRISVILLE POST OFFICE	0	0	0	6400	0	0	
PENNSYLVANIA BUCKS NEWPORTVILLE BRISTOL USARC	0	0	0	2501	0	0	

TABLE I

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LOCATIONS	REFUSE (LBS/DAY)		FUELS (PER YEAR)				COMMENTS
	OPEN BURNING	INCIN-ERATION	GAS (MCF)	DIST OIL (GALS)	RESID OIL (GALS)	COAL (TONS)	
PENNSYLVANIA BUCKS QUAKERSTOWN POST OFFICE	0	0	0	7000	0	0	
PENNSYLVANIA BUCKS SELLERSVILLE POST OFFICE	0	0	0	5800	0	0	
PENNSYLVANIA BUCKS WEST CHESTER POST OFFICE	0	0	0	0	0	0	PURCHASES STEAM
PENNSYLVANIA CHESTER COATESVILLE VETERANS HOSPITAL	0	700	0	1704000.	0	0	

TABLE I

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LOCATIONS	REFUSE (LBS/DAY)		FUELS (PER YEAR)				COMMENTS
	OPEN BURNING	INCIN-ERATION	GAS (MCF)	DIST OIL (GALS)	RESID OIL (GALS)	COAL (TONS)	
POST OFFICE	0	0	0	8000	0	0	
PENNSYLVANIA CHESTER PHOENIXVILLE							
POST OFFICE	0	0	0	0	0	35	
VALLEY FORGE HOSPITAL	0	19400.	0	0	1961000	0	ARMY
PENNSYLVANIA DELAWARE CHESTER							
POST OFFICE	0	0	0	25000	0	0	
USARC	0	0	2002	0	0	0	

TABLE I

FUEL USAGE AND REFUSE DISPOSAL FOR FEDERAL FACILITIES

LOCATIONS	REFUSE (LBS/DAY)		FUELS (PER YEAR)				COMMENTS
	OPEN BURNING	INCIN-ERATION	GAS (MCF)	DIST OIL (GALS)	RESID OIL (GALS)	COAL (TONS)	
PENNSYLVANIA DELAWARE DARBY POST OFFICE	0	0	0	6000	0	0	
PENNSYLVANIA DELAWARE DREXEL HILL POST OFFICE	0	0	0	10000	0	0	
PENNSYLVANIA DELAWARE FOLSOM NAVY RESERVE TRAINING CTR	0	20	0	24000	0	0	
PENNSYLVANIA DELAWARE MARCUS HOOK QUARANTINE STATION	0.	0	0	11000	0	0	

TABLE I

FUEL USAGE AND REFUSE DISPOSAL FOR FEDERAL FACILITIES

LOCATIONS	REFUSE (LBS/DAY)		FUELS (PER YEAR)				COMMENTS
	OPEN BURNING	INCIN-ERATION	GAS (MCF)	DIST OIL (GALS)	RESID OIL (GALS)	COAL (TONS)	
PENNSYLVANIA DELAWARE SWARTHMORE POST OFFICE	0	0	0	0	0	45	
PENNSYLVANIA DELAWARE UPPER DARBY POST OFFICE	0	0	0	15000	0	0	
PENNSYLVANIA DELAWARE WAYNE POST OFFICE	0	0	0	0	0	30	
PENNSYLVANIA MONTGOMERY AMBLER POST OFFICE	0	0	0	5000	0	0	

TABLE I

FUEL USAGE AND REFUSE DISPOSAL FOR FEDERAL FACILITIES

LOCATIONS	REFUSE (LBS/DAY)		FUELS (PER YEAR)				COMMENTS
	OPEN BURNING	INCIN-ERATION	GAS (MCF)	DIST OIL (GALS)	RESID OIL (GALS)	COAL (TONS)	
PENNSYLVANIA MONTGOMERY ARDMORE POST OFFICE	0	0	0	0	0	44	
PENNSYLVANIA MONTGOMERY BALA CYNWYO POST OFFICE	0	0	0	0	0	50	
PENNSYLVANIA MONTGOMERY BRYN MAWR POST OFFICE	0	0	0	6400	0	0	
PENNSYLVANIA MONTGOMERY CONSHOHOCKEN POST OFFICE	0	0	0	7000	0	0	

TABLE I

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LOCATIONS	REFUSE (LBS/DAY)		FUELS (PER YEAR)				COMMENTS
	OPEN BURNING	INCIN-ERATION	GAS (MCF)	DIST OIL (GALS)	RESID OIL (GALS)	COAL (TONS)	
PENNSYLVANIA MONTGOMERY HAVERFORD POST OFFICE	0	0	3000	0	0	0	
PENNSYLVANIA MONTGOMERY JENKINTOWN POST OFFICE	0	0	0	13000	0	0	
PENNSYLVANIA MONTGOMERY LANSDALE NO CITY ID	0	0	0	0	0	0	
NIKE 58	0	0	0	10000	0	0	

TABLE I

FUEL USAGE AND REFUSE DISPOSAL FOR FEDERAL FACILITIES

LOCATIONS	REFUSE (LBS/DAY)		FUELS (PER YEAR)				COMMENTS
	OPEN BURNING	INCIN-ERATION	GAS (MCF)	DIST OIL (GALS)	RESID OIL (GALS)	COAL (TONS)	
NIKE 41	0	0	0	10000	0	0	
POST OFFICE	0	0	0	7500	0	0	
PENNSYLVANIA MONTGOMERY NORRISTOWN							
POST OFFICE	0	0	0	5000	0	0	
USARC NORRISTOWN	0	0	0	0	0	144	
PENNSYLVANIA MONTGOMERY PHILADELPHIA							
WISSAHICKON USARC	0	0	0	33396	0	0	

TABLE I

FUEL USAGE AND REFUSE DISPOSAL FOR FEDERAL FACILITIES

LOCATIONS	REFUSE (LBS/DAY)		FUELS (PER YEAR)				COMMENTS
	OPEN BURNING	INCIN-ERATION	GAS (MCF)	DIST OIL (GALS)	RESID OIL (GALS)	COAL (TONS)	
PENNSYLVANIA MONTGOMERY ROYERSFORD							
POST OFFICE	0	0	0	0	0	38	
PENNSYLVANIA MONTGOMERY WILLOW GROVE							
NAVAL AIR FACILITY	0	0	0	294000	0	0	
AIR RESERVE FACILITY	0	0	0	0	580000	0	
HORSHAM USARC	0	0	0	2624	13784	0	
PENNSYLVANIA MONTGOMERY WYNDMOOR							
EASTERN RES LABORATORY	0	0	83660	4900	408000	0	DEPT OF AGRICULTURE

TABLE I

FUEL USAGE AND REFUSE DISPOSAL FOR FEDERAL FACILITIES

LOCATIONS	REFUSE (LBS/DAY)		FUELS (PER YEAR)				COMMENTS
	OPEN BURNING	INCIN-ERATION	GAS (MCF)	DIST OIL (GALS)	RESID OIL (GALS)	COAL (TONS)	
PENNSYLVANIA PHILADELPHIA PHILADELPHIA							
ARMY SUPPLY BASE	0	0	0	14000	115005	0	GSA OPERATED
COURT HOUSE MKT & CHSTNT	0	0	0	0	0	0	PURCHASES STEAM
FEDERAL BLDG	0	0	0	0	736050	0	5000 WISSAH-ICKON AVE
FRANKFORD ARSENAL	0	110	1414177	32608	3979157	0	
GSA BLDG 128 N BROAD	0	0	0	0	0	0	PURCHASES STEAM

TABLE I

FUEL USAGE AND REFUSE DISPOSAL FOR FEDERAL FACILITIES

LOCATIONS	REFUSE (LBS/DAY)		FUELS (PER YEAR)				COMMENTS
	OPEN BURNING	INCIN-ERATION	GAS (MCF)	DIST OIL (GALS)	RESID OIL (GALS)	COAL (TONS)	
INDEPENDENCE HIST PARK	0	0	0	5990	0	0	
MARINE CORPS CLOTHING DPT	0	0	0	0	600000	0	
NAVY BOILER SCHOOL	0	0	0	0	0	C	INACTIVE
NAVAL HOME	0	0	0	0	0	0	ELECTRIC HEAT
NAVY SHIPYARD	0	125000	1900	0	12458000	0	
NAVAL AIR ENGRG CENTER	0	0	0	0	440000	0	IN NAVAL SHIPYARD

TABLE I

FUEL USAGE AND REFUSE DISPOSAL FOR FEDERAL FACILITIES

LOCATIONS	REFUSE (LBS/DAY)		FUELS (PER YEAR)				COMMENTS
	OPEN BURNING	INCIN-ERATION	GAS (MCF)	DIST OIL (GALS)	RESID OIL (GALS)	COAL (TONS)	
NAVY DAMAGE CONTROL CNTR	0	0	0	5000	34000	0	IN NAVY SHIPYARD
NAVAL HOSPITAL	0	3	0	0	1543005	0	REFUSE BURND AT NAVY YARD
NAVAL SHIPS ENGR CENTER	0	0	0	0	1258000	0	IN NAVY SHIPYARD
NAVY SUPPLY DEPOT	0	0	105000	0	1600000	0	COAL CONVRSN FUEL ESTMTD
OUTPATIENT CLINIC (PHS)	0	50	0	0	8100	0	
PENN A C BLG 225 S 18TH	0	0	0	0	0	0	PURCHASES STEAM

TABLE I

FUEL USAGE AND REFUSE DISPOSAL FOR FEDERAL FACILITIES

LOCATIONS	REFUSE (LBS/DAY)		FUELS (PER YEAR)				COMMENTS
	OPEN BURNING	INCIN-ERATION	GAS (MCF)	DIST OIL (GALS)	RESID OIL (GALS)	COAL (TONS)	
PHILADELPHIA STORAGE SITE	0	0	0	0	0	0	CITY OWNED
POST OFFICE	0	0	0	12000	0	0	FAIRMONT STATION
POST OFFICE	0	0	0	6000	0	0	KINGSESSING STATION
MAIN POST OFFICE	0	0	0	0	0	0	PURCHASES STEAM
NORTH POSTAL ANNEX	0	0	0	0	40000	0	
POST OFFICE	0	0	0	0	0	86	SOUTHWARK STATION

TABLE I

FUEL USAGE AND REFUSE DISPOSAL FOR FEDERAL FACILITIES

LOCATIONS	REFUSE (LBS/DAY)		FUELS (PER YEAR)				COMMENTS
	OPEN BURNING	INCIN-ERATION	GAS (MCF)	DIST OIL (GALS)	RESID OIL (GALS)	COAL (TONS)	
PHILADELPHIA STORAGE SITE	0	0	0	0	0	0	CITY OWNED
POST OFFICE	0	0	0	12000	0	0	FAIRMONT STATION
POST OFFICE	0	0	0	6000	0	0	KINGSESSING STATION
MAIN POST OFFICE	0	0	0	0	0	0	PURCHASES STEAM
NORTH POSTAL ANNEX	0	0	0	0	40000	0	
POST OFFICE	0	0	0	0	0	86	SOUTHWARK STATION

TABLE II

ANNUAL FUEL USE BY FEDERAL FACILITIES

	COAL (TONS)	RESID OIL (GAL)	DIST OIL (GAL)	GAS (MCF)
DELAWARE				
NEW CASTLE	86.	530,001	48,301	0.
NEW JERSEY				
BURLINGTON	69,895	14,602,613	3,766,267.	3,130.
CAMDEN	0	0.	252,300	0
GLOUCESTER	0.	0.	15,500	662
MERCER	177.	1,131,000.	53,254.	13,000
SALEM	0.	207,870.	13,780.	0.
PENNSYLVANIA				
BUCKS	0.	1,215,000.	39,701.	0
CHESTER	35.	1,961,000	1,712,000	0
DELAWARE	75.	0	91,000	2,002
MONTGOMERY	276.	1,001,784	398,820	86,660
PHILADELPHIA	130	23,525,824.	91,598	1,554,482
TOTAL	70,674.	44,175,072.	6,482,521	1,659,936

TABLE III

FEDERAL CONTRIBUTION TO AIR POLLUTION
(TONS/YEAR)

	SOX	NOX	CO	PART	HC
DELAWARE					
NEW CASTLE	40.	20.	20.	10.	1.
STATE TOTAL	40.	20.	20.	10.	1.
NEW JERSEY					
BURLINGTON	2000.	1100.	390.	1200.	110.
CAMDEN	9.	2.	1.	1.	1.
GLOUCESTER	1.	1.	1.	1.	1.
MERCER	90.	40.	10.	20.	2.
SALEM	10.	1.	1.	1.	1.
STATE TOTAL	2110.	1144.	403.	1223.	115.
PENNSYLVANIA					
BUCKS	90.	40.	2.	10.	1.
CHESTER	220.	110.	60.	40.	5.
DELAWARE	5.	1.	2.	1.	1.
MONTGOMERY	90.	50.	8.	20.	3.
PHILADELPHIA	1700.	1200.	370.	330.	40.
STATE TOTAL	2105.	1401.	442.	401.	50.
AREA TOTAL	4220.	2565.	865.	1634.	166.

TABLE IV

FEDERAL POINT SOURCES
(TONS/YEAR)

	SOX	NOX	CO	PART	HC
NEW JERSEY					
BURLINGTON					
ARMY AMMO PLANT	560	320	9	100	9
FORT DIX	1640	510	170	590	54
MCGUIRE AFB	560	410	60	200	20
PENNSYLVANIA					
CHESTER					
VALLEY FORGE HOSPITAL	140	50	60	30	3
PHILADELPHIA					
FRANKFORD ARSENAL	190	220	5	60	4
NAVY SHIPYARD	1000	670	360	200	30
NAVAL HOSPITAL	120	60	2	20	2
NAVAL SHIPS ENGR CENTER	110	70	1	6	2

NOTE: A POINT SOURCE IS AN INSTALLATION WHICH EMITS OVER 100 TONS/YEAR OF ONE OR MORE OF THE FIVE POLLUTANTS.

TABLE V

COAL-FIRED BOILERS IN VIOLATION OF 42 CFR 76.4

INSTALLATION NAME	BOILER SIZE (MM BTU/HR EA.)	NUMBER	COAL USED (TONS/YEAR EA.)	PARTS EMITTED (TONS/YEAR EA.)	PARTS ALLOWED (TONS/YEAR EA.)
FORT DIX	7.9	3	1,843	63	32.1
FORT DIX	16.0	2	3,734	127	58.6
POST OFFICE (PHOENIXVILLE, PA.)	0.7	1	35	1	0.5

TABLE VI

ABATEMENT PROGRAM FOR FEDERAL FACILITIES

IN THE

METROPOLITAN PHILADELPHIA INTERSTATE

AIR QUALITY CONTROL REGION

LEGEND:

A. Statement of problem
B. Abatement measures proposed in the five year plan*
C. Abatement measures accomplished or in progress
(blank indicates no progress as of July 1970)
D. Abatement measures needed but not reported in the plan

NOTE:

Local legislation forbids the use of residual fuel oil with a sulfur content greater than 0.6%. Although some Federal installations have met this requirement, most have been forced by a short supply of the low sulfur fuels to use 1.0% sulfur content residual oil. This situation will be rectified as soon as legal fuel oil becomes available.

DELAWARE

NEW CASTLE COUNTY

FOLSOM

Navy and Marine Reserve Training Center

1.A. Incinerator burning classified (paper) wastes
B. Install macerator and contract haul refuse in FY 72
C.

WILMINGTON

Veterans Administration Hospital

1.A. Incinerator burning 4,730 pounds refuse per day
B. Structurally modify and add scrubber in order to conform to 42 CFR 76.8 in FY 71
C.

* 1968 - 1973 plan per Executive Order 11507

NEW JERSEY

BURLINGTON COUNTY

BURLINGTON

Burlington Army Ammunition Plant

1.A. High sulfur content fuel oil
B. Obtain low sulfur fuel oil as soon as possible
C.

Fort Dix

1.A. Two coal fired boilers in building 4259 (the old base hospital)
B. Originally the Army wanted to cease operating these boilers and supply heat to the hospital via a connecting steam line from a distant oil fired boiler plant. This was found not practical. A study is now in progress on the costs and feasibility of replacing or converting the present plant to use oil.
C.

2.A. Three coal fired boilers in building 4102 (base laundry)
B. These boilers are to be replaced in FY 72. An interim measure to reduce the smoke emitted from this unit's stacks is a proposed over fire air port modification to be completed by October 1970
3.A. High sulfur content of fuel oils
B. See note above
C.
4.A. Pathological waste incinerator burning 1000 pounds per day type 4 waste
B. Construct new incinerator to destroy the high BTU content portions of the type 4 waste mixture allowing the pathological waste incinerator to burn the material for which it was designed.

WRIGHTSTOWN

McGuire Air Force Base

1.A. One coal fired heating plant in building 34-02
B. Convert to #4 fuel oil in FY 1969
C. Project completed
2.A. Coal fired central heating plant (building 2101)

MERCER COUNTY

TRENTON

Navy Propulsion Test Center

1.A. High volume, high heat exhausts from turbine test stands
B. Addition of scrubbers to test stands as soon as developed - estimated in 1974

PENNSYLVANIA

BUCKS COUNTY

JOHNSVILLE

Naval Air Development Center

1.A. Fire fighting school that burns oil in the open
B. Provide a smokeless open fire as being developed by the Navy Training Device Center in Orlando, Florida. Construction to begin in FY 72
C.
2.A. Pathological incinerator burning 50 pounds per day
B. Install a wet scrubber in FY 73
C.
3.A. Classified waste incinerator burning approximately 200 pounds of paper per day
B. Install wet scrubber in FY 73

CHESTER COUNTY

COATESVILLE

Veterans Administration Hospital

1.A. Incinerator burning 700 pounds per day of mixed trash and pathological waste
B. Install flue gas washer to meet Veterans Administration incinerator emission regulations in FY 71
C.

PHOENIXVILLE

Valley Forge General Hospital

1.A. Incinerator burning ten tons per day of mixed trash, pathological, and classified wastes
B. By October 1970 an outside contractor will be paid to haul approximately 70% of the refuse away - leaving the pathological and classified wastes to be incinerated in the present unit. The Army Environmental Health Services will conduct a study in 1971 of the refuse disposal problems and determine the best replacement incinerator for this installation. The present incinerator will be replaced by this new unit in FY 73
C.

PENNSYLVANIA (Continued)

PHILADELPHIA COUNTY

PHILADELPHIA

Navy Damage Control Center (in Navy Shipyard

1.A. Open burning of oil and gasoline in firefighting school
B. Build an enclosed structure with ducted after burners in FY 70
C.

Naval Ships Engineering Center (in Navy Yard)

1.A. Boilers, simulating shipboard plants, burn low grade, high sulfur fuel oil to mirror conditions and fuels available at sea
B. Install system to remove sulfur oxides from stack gases in FY 73
C. An interim measure of cutting the high sulfur oil with lower sulfur oil is in effect. Sulfur contents that were previously at a high of 3.5 to 5.8% sulfur are now approximately 2%

Navy Supply Depot (in Navy Yard)

1.A. Coal fired heating plant
B. Convert to residual oil with natural gas standby in FY 69
C. Conversion completed. (note fuel use in Table I is estimate based on BTU value of coal used previously)

Navy Hospital

1.A. One general refuse incinerator
B. Incinerator is presently inactive, refuse is being burned at the Navy Yard's incinerator. Use of this unit will resume when particulate collection device is added in FY 72
C.
2.A. Pathogenic incinerator
B. Plans are to abandon use of this incinerator and ship refuse to municipal incinerator at an unspecified date.
C.

PENNSYLVANIA (Continued)

MONTGOMERY COUNTY

NORRISTOWN

U. S. Army Reserve Center

1.A. Coal fired boiler plant
B. Convert to distillate oil in FY 72

PHILADELPHIA COUNTY

PHILADELPHIA

Frankford Arsenal

1.A. Residual oil fired boiler plant
B. Convert to low sulfur content distillate oil operation in FY 72
C. This plan has been dropped due to the availability to this installation of 0.6% sulfur residual fuel oil

Marine Corps Clothing Depot

1.A. Two residual oil fired boilers
B. Convert boilers from Number 6 oil operation to natural gas with Number 6 oil standby in FY 72
C.

Navy Shipyard

1 A. One general waste incinerator
B. Either move incineration operation off the base or update the present incinerator with air-polluting devices in FY 73
C.
2.A. One classified waste (paper) incinerator
B. Obtain macerator and combine the refuse with the trash being burned in the incinerator in problem one in FY 72
3.A. Foundary operation (bronze, brass, etc.)
B. Add particulate collection system of new furnaces in FY 73
C.

PENNSYLVANIA (Continued)

PHILADELPHIA COUNTY

PHILADELPHIA

Veterans Administration Hospital

1.A. Two incinerators; one pathological and one general refuse
B. These units will be tested against 42 CFR 76.8 and/or the Veterans Administration Incineration specifications. If not in compliance, control measures will be taken
C.

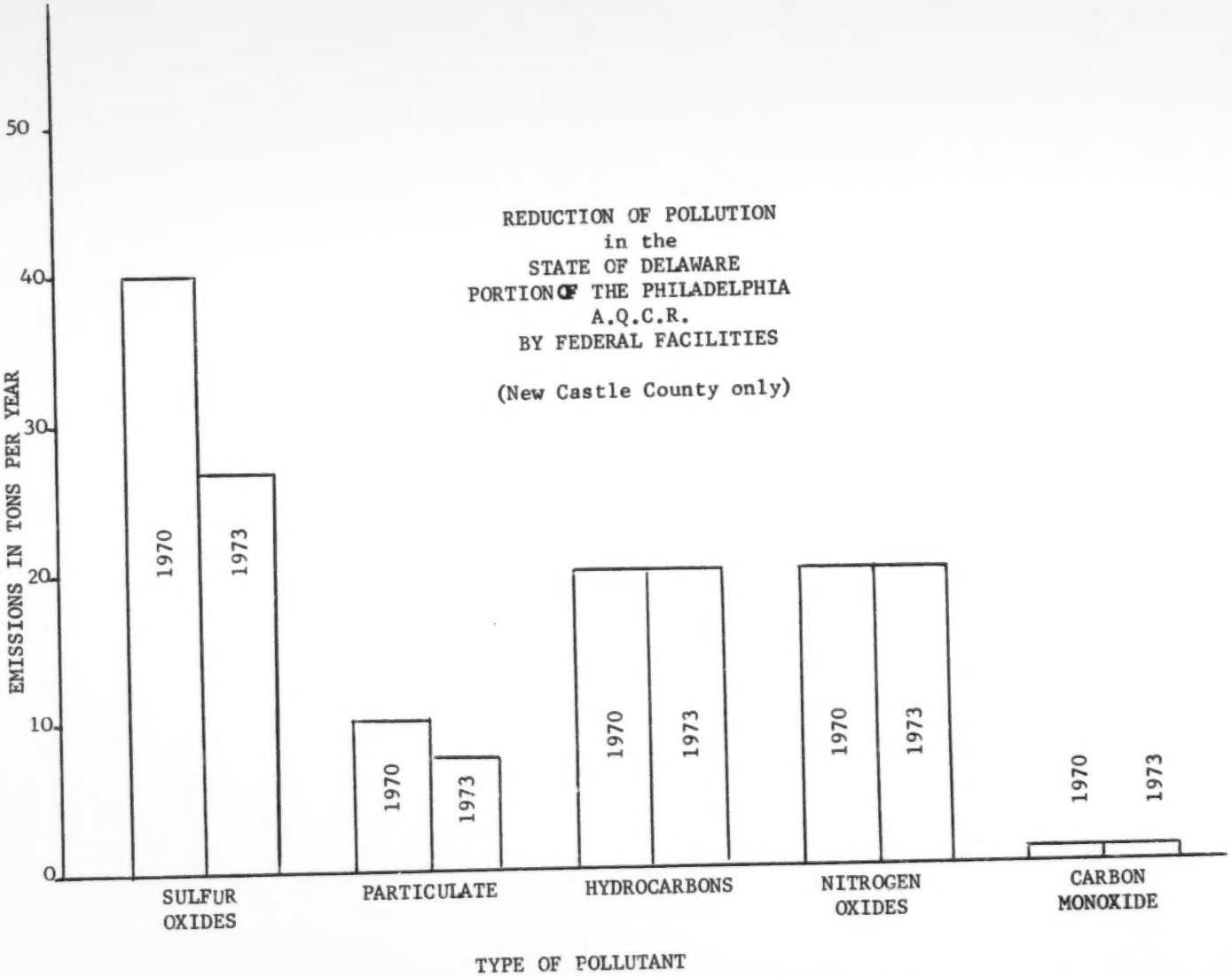
Public Health Service Outpatient Clinic

1.A. Single chambered incinerator
B. Install new multiple chambered incinerator for the facility's refuse in FY 70
C.

TABLE VII

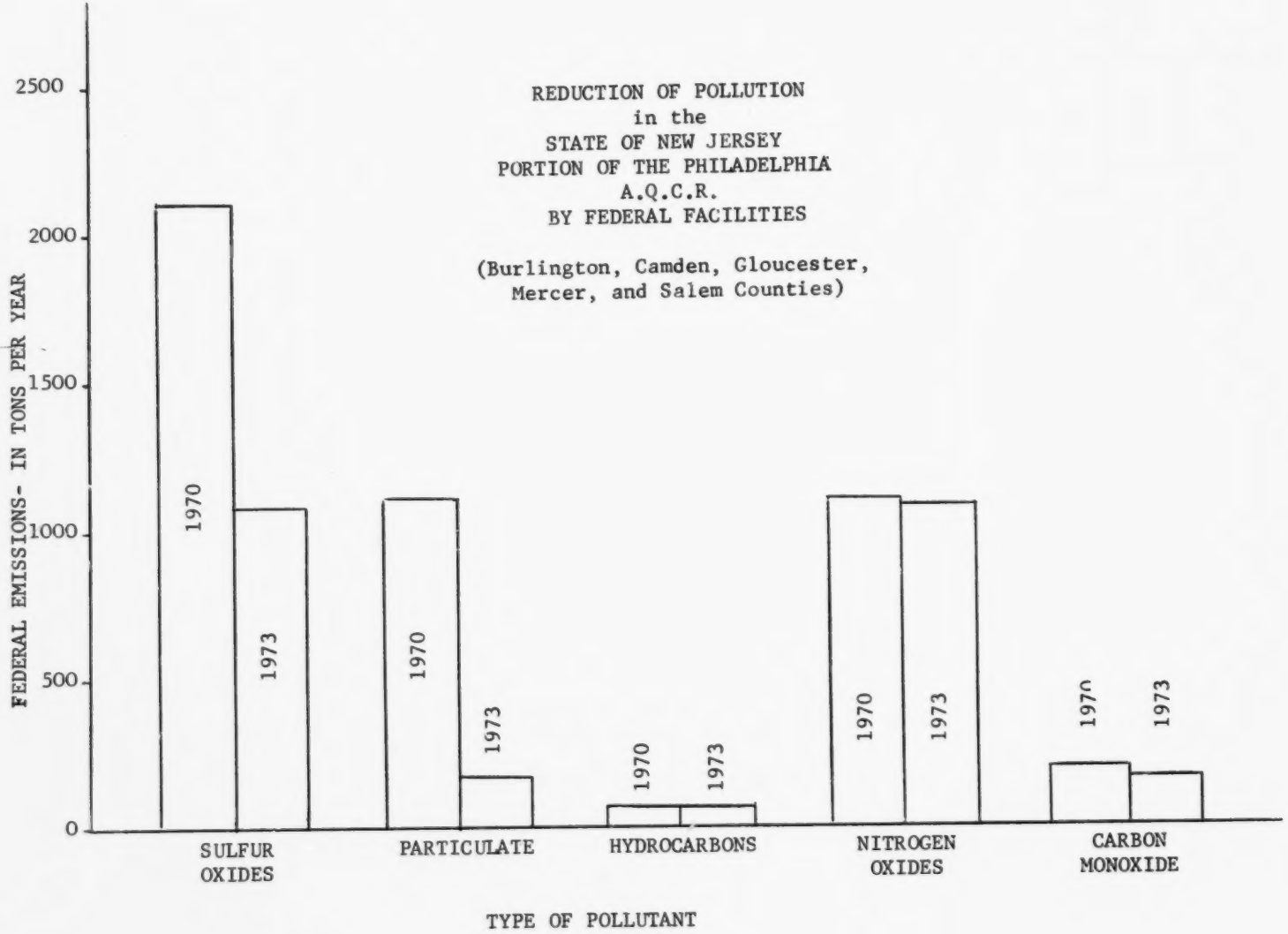
POLLUTION REDUCTION GOALS

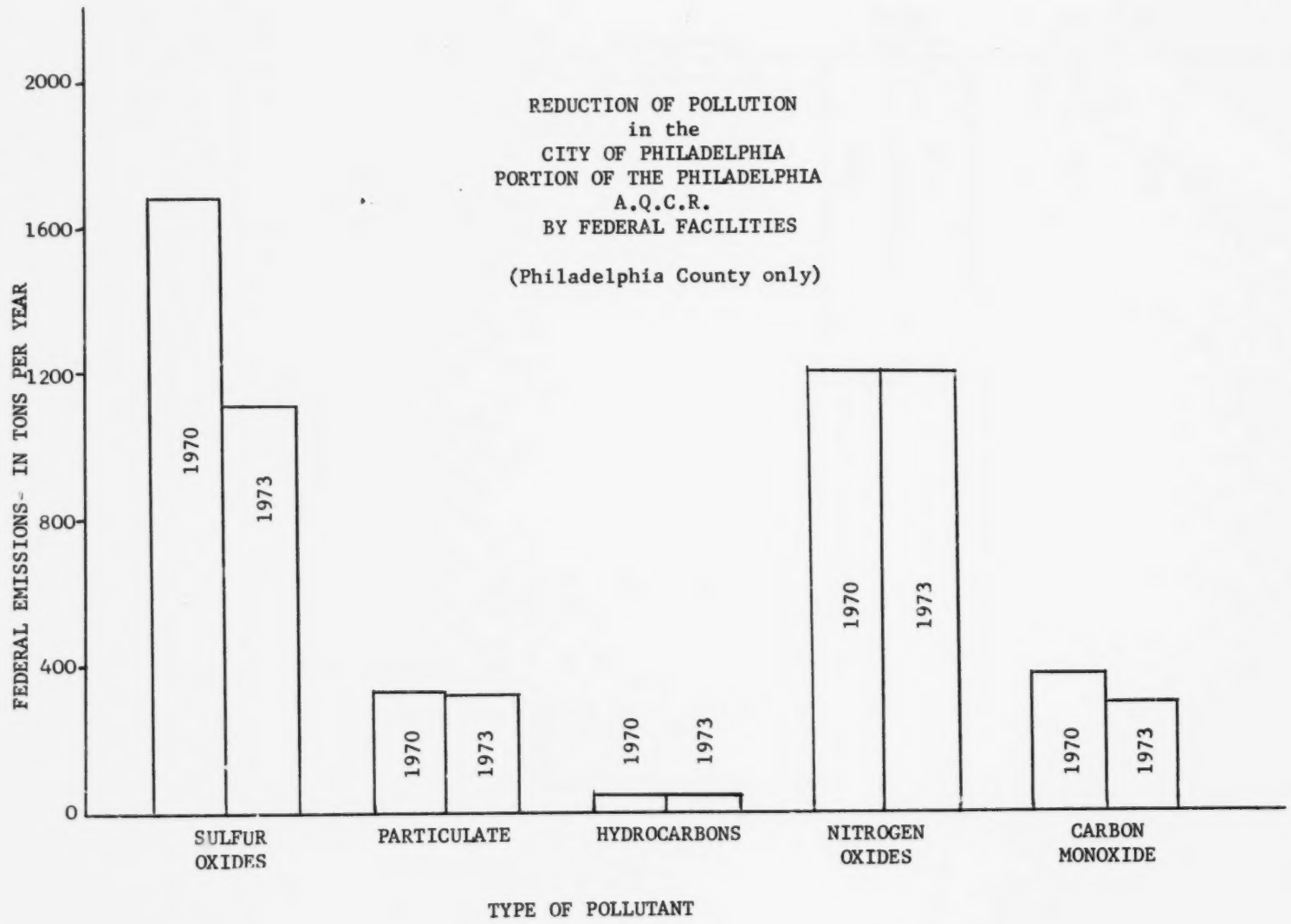
The following graphs illustrate the reduction of pollution from Federal facilities to be expected by 1973 if all of the proposed abatement plans are implemented.

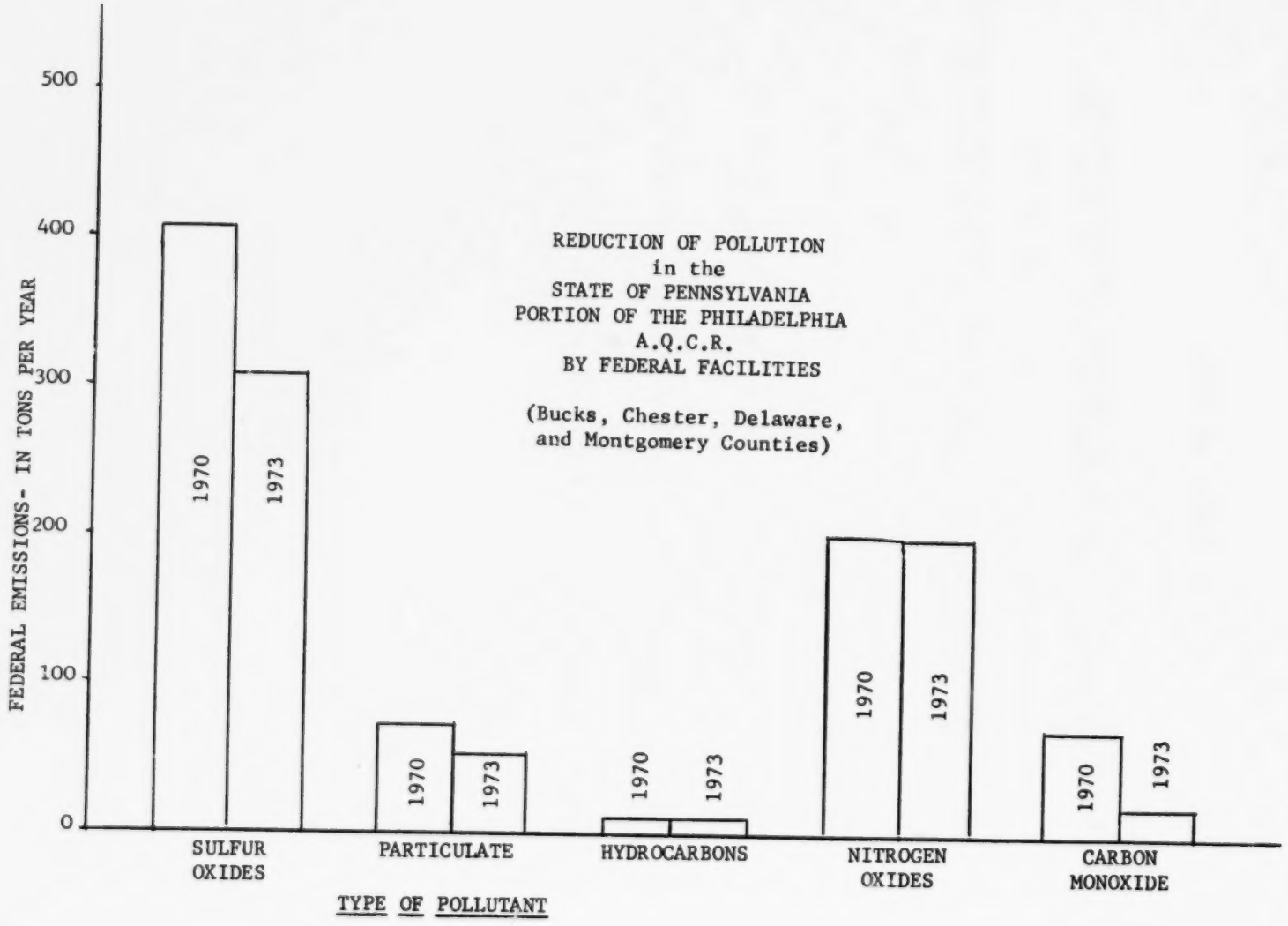

REDUCTION OF POLLUTION
in the
STATE OF DELAWARE
PORTION OF THE PHILADELPHIA
A.Q.C.R.
BY FEDERAL FACILITIES
(New Castle County only)
EMISSIONS IN TONS PER YEAR
50
40
30
20
10
0
1970
1973
SULFUR OXIDES
PARTICULATE
HYDROCARBONS
NITROGEN OXIDES
CARBON MONOXIDE
TYPE OF POLLUTANT

REDUCTION OF POLLUTION
in the
STATE OF NEW JERSEY
PORTION OF THE PHILADELPHIA
A.Q.C.R.
BY FEDERAL FACILITIES

(Burlington, Camden, Gloucester,
Mercer, and Salem Counties)




REDUCTION OF POLLUTION
in the
CITY OF PHILADELPHIA
PORTION OF THE PHILADELPHIA
A.Q.C.R.
BY FEDERAL FACILITIES
(Philadelphia County only)
FEDERAL EMISSIONS - IN TONS PER YEAR
2000
1600
1200
800
400
0
1970
1973
SULFUR OXIDES
PARTICULATE
HYDROCARBONS
NITROGEN OXIDES
CARBON MONOXIDE
TYPE OF POLLUTANT


REDUCTION OF POLLUTION
in the
STATE OF PENNSYLVANIA
PORTION OF THE PHILADELPHIA
A.Q.C.R.
BY FEDERAL FACILITIES
(Bucks, Chester, Delaware,
and Montgomery Counties)
FEDERAL EMISSIONS- IN TONS PER YEAR
500
400
300
200
100
0
1970
1973
SULFUR OXIDES
PARTICULATE
HYDROCARBONS
NITROGEN OXIDES
CARBON MONOXIDE
TYPE OF POLLUTANT

REFERENCES AND NOTES

1. Duprey, R.L., Compilation of Air Pollutant Emission Factors, Public Health Service Publication No. 999-AP-42, 1968.

   All calculated emissions are based on these factors.

2. Report for Consultation on the Metropolitan Philadelphia Interstate Air Quality Control Region, Public Health Service, 1968.

   Data on emissions from all sources used to calculate percent government contribution were obtained from this report.

3. Clean Air Act, as amended (42 U.S.C. 1857 - 1857L) Sec 107, Sec 111. November 21, 1967.

4. Executive Order 11507, Prevention, Control, and Abatement of Air and Water Pollution at Federal Facilities, February 4, 1970.

5. Title 42 - Public Health, Chapter I, Subchapter F, Part 76, June 2, 1966.

6. Bureau of the Budget Circular A-76 (Revised), May 18, 1970.

* U. S. GOVERNMENT PRINTING OFFICE : 1970—436-616/80